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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/918,719	08/01/2001	Richard W. Fling	2037.0030000	2458
30734	7590	09/08/2004	EXAMINER	
BAKER + HOSTETLER LLP WASHINGTON SQUARE, SUITE 1100 1050 CONNECTICUT AVE. N.W. WASHINGTON, DC 20036-5304				DANG, HUNG Q
		ART UNIT		PAPER NUMBER
		2635		

DATE MAILED: 09/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/918,719	FLING ET AL.
	Examiner	Art Unit
	Hung Q Dang	2635

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 01 August 2001.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-39 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) 13-21 is/are allowed.

6) Claim(s) 1,22 and 31 is/are rejected.

7) Claim(s) 2-12,23-30 and 32-39 is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on 01 August 2001 is/are: a) accepted or b) objected to by the Examiner.

 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)
2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 11/4/2003.

4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ .
5) Notice of Informal Patent Application (PTO-152)
6) Other: _____

DETAILED ACTION

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Tsao U.S. Patent 3,900,878.

Regarding claim 1, Tsao teaches a transmitted magnetic field signal comprising a carrier component frequency substantially equal to an integer multiple of 300Hz (column 4, lines 39-41). The claimed limitation “useable for locating an underground object” is not a positive limitation but only requires the ability to so perform. The signal disclosed by Tsao is indeed *useable* for locating an underground object.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 22 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsao U.S. Patent 3,900,878.

Claims 22 and 31 are rejected for the same reasons as claim 1. The transponder in this case is shown in figure 3 or figure 1 unit 13 (column 4 lines 36-42). The claimed

limitation “generate the magnetic field signal when driven by the drive signal, the magnetic field signal having a magnetic field carrier component equal to the carrier component frequency” is merely stating the conventional process of generating a signal, and therefore, by conventionality, it is rejected.

Allowable Subject Matter

5. Claims 2-12, 23-30 and 32-39 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claims 2, 23, 27 and 32, the prior arts of record fail to teach or disclose a transmitted magnetic field signal as claimed in claim 1, which further comprises an information sideband including sideband energy, a substantial portion of the sideband energy being contained between the carrier component frequency and a frequency spaced 50Hz from the carrier component frequency.

Regarding claim 5, the prior arts of record fail to teach or disclose a transmitted magnetic field signal as claimed in claim 1, which further comprises a lower information sideband including lower sideband energy, a substantial portion of the lower sideband energy being contained between the carrier component frequency and a frequency spaced 50 Hz below the carrier component frequency; and an upper information sideband including upper sideband energy, a substantial portion of the upper sideband energy being contained between the carrier component frequency and a frequency spaced 50 Hz above the carrier component frequency.

Claims 13-21 are allowed.

Regarding claim 13, the prior arts of record fail to teach or disclose a transmitted magnetic field signal in an environment that includes interference signals at regular harmonic intervals that are spaced 50Hz or 60Hz apart from one another as claimed in claim 13, which further includes at least one information sideband including sideband energy, a substantial portion of the sideband energy being contained between the carrier component frequency and a frequency spaced 50Hz from the carrier frequency.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung Q Dang whose telephone number is (571) 272-3069. The examiner can normally be reached on 9:30AM-6PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Horabik can be reached on (571) 272-3068. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you

have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

HD

MICHAEL HORABIK
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600

